



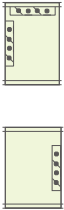
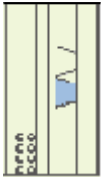








VENTILATION • AIR CONDITIONING • DUST COLLECTION



AIR HANDLING UNITS



Standard Components

No	Unit Section	Diagram
1	Return/Mixing/Supply Chamber	
2	Electrostatic/Bag/Combined Filter	
3	Cooling Coil	
4	Heating Coil	
5	Steam Humidifier	
6	Fan	
7	Combined Mixing Chamber	
8	Attenuator	
9	Plenum/Access	
10	High Efficiency Filter	
11	Energy Recovery*	

AHU – AIR HANDLING UNITS



Air handling units are modular built for indoor or outdoor installation. Intended to be built in general ventilation and air-conditioning systems. Universal application: office buildings, stores, hotels and restaurants, swimming pools, industrial buildings, etc. Depending of the air flow, they could be separated in standard sizes from 1000 m³/h to 60000 m³/h.

Units are offered in various configurations:

1. Floor mounted
2. Ceiling Suspended
3. Loft Mounted

Construction

Supporting frame made of special aluminum profiles, connected with aluminum corners. Construction sides are closed with thermo and acoustic insulated panels. In this structure (UU universal section) are incorporated all necessary elements for air treatment.

Sidepanels

Panels made of galvanized sheet steel with powder coating at their external side (RAL7035) and heat and acoustic insulated middle layer.

Two versions of side panels are possible:

- Standard thickness of 25mm for various models
- Standard thickness of 50mm for various model
- On request - for outdoor installation with thickness 50mm

Types of sections

Fan section

The section consists of centrifugal fan with forward or backward curved impeller. The type of fan is selected depending to the specific requirements, according to the air flow and resistance of the installation:

- BDB - Belt-driven double inlet centrifugal fan with backward curved impeller, standard version
- CBP - Belt-driven double inlet centrifugal fan with forward curved impeller
- BPF - Direct-driven single inlet centrifugal fan with backward curved impeller.

The impellers used are statically and dynamically balanced.

Mounted to the frame on anti-vibration mounts, equipped with flexible connection. This avoids the transmission of vibration to the casing.

Fans are driven by electrical motor, using belt drive or directly incorporated to the fan. The belts which are used are type B or SPB. Belt pulleys are with fixing bush (hub). For easier belt tension motors are installed on a slider.

All motors are three phase 400V/50Hz, protection class IP54, class F insulation and working mode S1 (continuous). Ambient temperature: $-30^{\circ}\text{C} \div +40^{\circ}\text{C}$.

Maximum working temperature $+60^{\circ}\text{C}$ and maximum altitude 1000m.

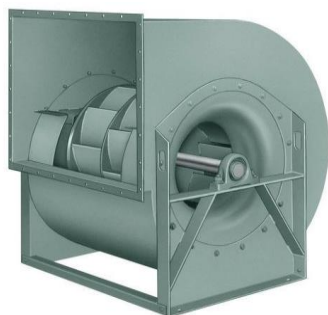
Insulation panels made of extruded polystyrene XPS type with density 32 kg/m^3 , thermal conductivity $\lambda=0.039\text{ W/m K}$ and combustibility class M1.

Upon request panels could be made of compressed mineral wool with density $60\text{-}100\text{ kg/m}^3$, thermal conductivity $\lambda=0.037\text{ W/m K}$ and combustibility class M0.

The panels are fixed with self-tapping screws or metric bolts. Sides which should be opened for inspection and maintenance are performed as doors, equipped with knuckles and special locks. Revision covers could be fixed to the supporting frame with reamers – upon request.

Visual inspection is made through manhole incorporated in the panel.

Sealing of the panels to the constructions is ensured by strips of self-adhesive cellular rubber.



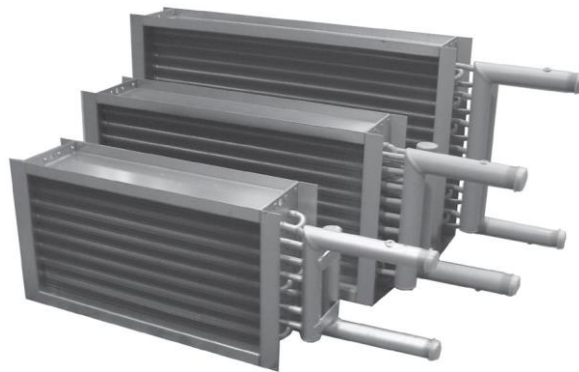
• TU - Thermal section

Include heating and/or cooling section (heat exchanger), drop separator and drain tray.
Types of sections (heat exchanger) that could be incorporated

- Two-rows (2R) – basically used in heating mode.
- Four-rows (4R) – basically used in cooling mode.
- Six-rows (6R) and eight-rows (8R) could be produced upon request.

Heat exchangers “Water-air”(heating and cooling) are tubular-plate type, made of copper pipes with strung on them aluminium fins with step 2.3mm. Good contact between pipes and fins is achieved by mechanical distension. Incorporated in the section by guides (rails), ensuring the sealing by air.

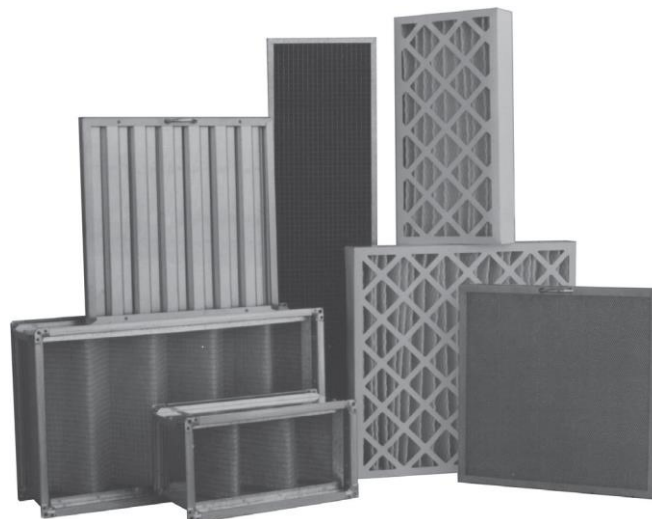
Drop eliminator is a cassette of profiled blades, designed to retain the condensation after the cooling section.



• AFU - Air filter section

Air filter section contains one or two consequently mounted air filters with different efficiency from lower to higher class.

Various kinds of filters are used such as Pre filter, Fine filter, HEPA filter, Bag Filter to cater different applications



• CMU - Mixing section

Build of one or two universal sections, horizontally or vertically adjoined.

Equipped with three dampers (PRJ – multiple leaf damper)

- Outlet (exhaust air)
- Inlet (fresh air)
- Mixing – mounted between both streams

For smooth control is recommended damper with electric motor (actuator) and device for uniform signal control.



- Inlet / outlet sections

Sections similar to those described above, equipped with one or more control valves (PJR) with build-in single-stage filter for inlet section or EK-N duct type electric heater.

• Supporting frame

Made of aluminium corners and profiles of galvanized sheet steel with high 100mm. Mounted under each section of one-storeyed units. In double deck version for top row section supporting frame is not provided. To ease the transportation and installation in the supporting frame are provided openings for lift up with mechanization.

Options and additional features

In air handling units could be incorporated also:

- Fans with 2-speed motors
- Fans with direct-drive motors and inverter
- Germ Filters

For outdoor installation:

- Sections with increased insulation thickness (50mm) for outdoor installation
- Additional roof covers to lead the rain water
- Protection guard for direct discharge with net
- Steps (feet) for installation on surface with inclination up to 5%.

SINGLE/ DOUBLE SKIN HORIZONTAL UNIT

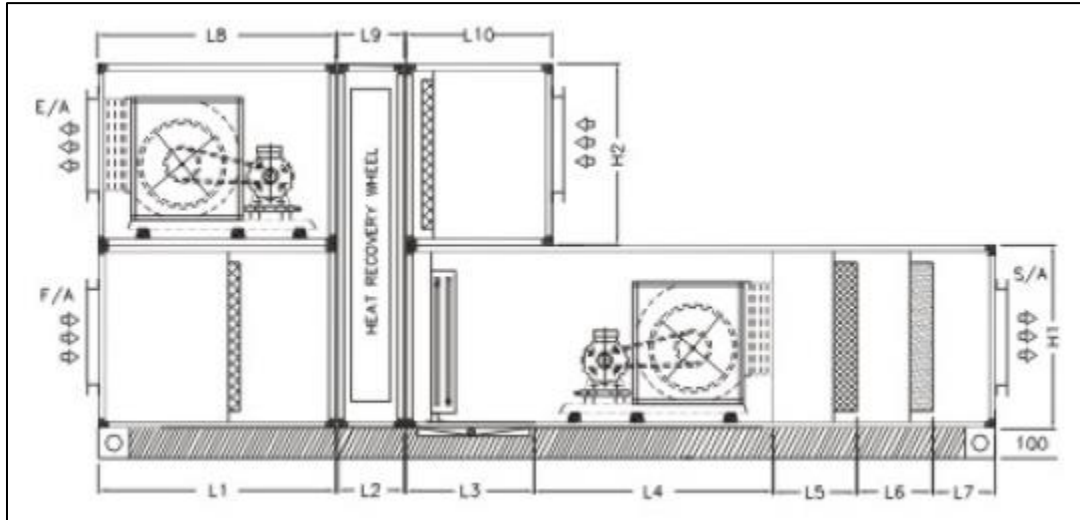
CFM	FAN MODEL	FAN OUTLET VELOCITY (m/s)	COIL AREA (Sq./Ft.)	RPM / MOTOR KW AT A STATIC PRESSURE		OVERALL DIMENSIONS		
				40 MM	50 MM	LENGTH	WIDTH	HEIGHT
1200	9 x 9 x 1	7.3	2.4	1368/0.75	1550/0.75	1310	810	730+100
1500	9 x 9 x 1	9.1	3.0	1338/0.75	1511/0.75	1310	850	730+100
2000	10/10 x 1	9.9	4.0	1177/0.75	1325/1.1	1360	950	750+100
2500	12/12 x 1	8.8	5.0	1021/1.1	1156/1.5	1440	1120	750+100
3000	15 x 15 x 1	10.5	6.0	1005/1.1	974/1.5	1440	1200	780+100
3500	15 x 15 x 1	8.7	7.0	850/1.5	961/2.2	1530	1330	780+100
4000	15 x 15 x 1	9.9	8.0	842/1.5	949/2.2	1530	1370	850+100
4500	18 x 18 x 1	8.0	9.0	713/2.2	804/2.2	1670	1630	950+100
5000	18 x 18 x 1	8.9	10.0	708/2.2	797/2.2	1670	1640	950+100
5500	18 x 18 x 1	9.7	11.0	706/2.2	792/3.7	1670	1460	1100+100
6000	450 x 1	8.7	12.0	724/3.7	821/3.7	1800	1560	1100+100
6500	450 x 1	9.5	13.0	718/3.7	812/3.7	1800	1665	1100+100
7000	450 x 1	10.2	14.0	715/3.7	806/3.7	1800	1675	1100+100
7500	500 x 1	8.7	15.0	659/3.7	741/3.7	1925	1680	1175+100
8000	500 x 1	9.3	16.0	658/3.7	738/5.5	1925	1950	1175+100
8500	500 x 1	9.9	17.0	658/3.7	737/5.5	1925	1900	1200+100
9000	560 x 1	8.3	18.0	586/3.7	661/5.5	2050	1780	1400+100
10000	560 x 1	9.2	20.0	584/3.7	656/5.5	2050	1930	1400+100
10000	560 x 1	9.2	20.0	584/3.7	656/5.5	2050	1930	1400+100
11000	560 x 1	10.2	22.0	584/5.5	653/5.5	2050	2100	1400+100
12000	630 x 1	8.8	24.0	511/5.5	577/7.5	2220	2060	1500+100
13000	630 x 1	9.6	26.0	508/5.5	573/7.5	2270	2300	1500+100
14000	710 x 1	8.2	28.0	459/5.5	516/7.5	2450	2100	1750+100
15000	710 x 1	8.8	30.0	457/5.5	514/7.5	2450	2150	1750+100
16000	710 x 1	9.4	32.0	457/7.5	512/7.5	2450	2350	1750+100
17000	710 x 1	9.9	34.0	457/7.5	511/9.3	2450	2380	1750+100
18000	800 x 1	8.4	36.0	399/7.5	448/9.3	2650	2350	2050+100
19000	800 x 1	8.8	38.0	398/7.5	447/9.3	2650	2450	2050+100
20000	800 x 1	9.3	40.0	398/7.5	446/9.3	2650	2560	2050+100
21000	800 x 1	9.8	42.0	398/7.5	445/11.0	2650	2670	2050+100
22000	800 x 1	10.2	44.0	399/9.3	445/11.0	2650	2800	2050+100
23000	900 x 1	8.5	46.0	361/9.3	408/11.0	2780	2800	2100+100
24000	900 x 1	8.9	48.0	360/9.3	406/15.0	2780	2900	2100+100
25000	900 x 1	9.2	50.0	359/11.0	405/15.0	2780	2950	2100+100
26000	900 x 1	9.6	52.0	359/11.0	404/15.0	2780	3050	2100+100
27000	900 x 1	10.0	54.0	358/11.0	403/15.0	2900	3150	2100+100
28000	1000 x 1	8.2	56.0	322/11.0	365/15.0	3110	3110	2400+100
29000	1000 x 1	8.5	58.0	321/11.0	364/15.0	3110	3200	2400+100
30000	1000 x 1	8.8	60.0	320/11.0	362/15.0	3110	3260	2250+100
32000	1000 x 1	9.4	64.0	319/15.0	360/15.0	3110	3260	2400+100
35000	1000 x 1	10.3	70.0	318/15.0	357/18.5	3110	3360	2710+100

SINGLE/ DOUBLE SKIN VERTICAL FLOOR MOUNTED UNIT

AIR HANDLING UNITS

AIR VOLUME (CFM)	FAN MODEL	FAN OUTLET VELOCITY (M/S)	COIL AREA SQ./FT	OVERALL DIMENSIONS			RPM / MOTOR KW AT A STATIC PRESSURE		
				DEPTH	WIDTH	HEIGHT	30 MM WG	40 MM WG	50 MM WG
1200	9 x 9 x 1	7.3	2.4	630	925	1050+100	1166/0.5	1368/0.75	1550/0.75
1500	9 x 9 x 1	9.1	3.0	630	1050	1100+100	1152/0.5	1338/0.75	1511/0.75
2000	10 x 10 x 1	9.9	4.0	670	1050	1250+100	1017/0.75	1177/0.75	1325/1.1
2500	12 x 12 x 1	8.8	5.0	740	1225	1350+100	872/0.75	1021/1.1	1156/1.5
3000	9 x 9 x 2	9.1	6.0	630	1540	1160+100	1210/0.75	1405/1.5	1586/1.5
4000	10 x 10 x 2	9.9	8.0	670	1750	1260+100	1068/1.5	1236/2.2	1391/2.2
5000	12 x 12 x 2	8.7	10.0	740	1960	1360+100	916/1.5	1072/2.2	1213/3.7
6000	12 x 12 x 2	10.5	12.0	740	2060	1450+100	911/2.2	1055/3.7	1190/3.7
7000	15 x 15 x 2	8.7	14.0	830	2160	1725+100	765/2.2	893/3.7	1009/3.7
8000	15 x 15 x 2	9.9	16.0	830	2210	1760+100	765/3.7	884/3.7	996/5.5
10000	18 x 18 x 2	8.9	20.0	990	2560	1860+100	641/3.7	743/5.5	837/5.5
12000	18 x 18 x 2	10.6	24.0	990	2825	1925+100	646/5.5	741/5.5	829/7.5
14000	450 x 2	10.2	28.0	1080	2625	2380+100	622/2.2 x 2	715/3.7 x 2	806/3.7 x 2
16000	500 x 2	9.3	32.0	1230	3025	2480+100	572/3.7 x 2	658/3.7 x 2	738/5.5 x 2
18000	500 x 2	10.4	36.0	1200	3025	2580+100	580/3.7 x 2	660/3.7 x 2	736/5.5 x 2

DOUBLE SKIN UNIT WITH HEAT RECOVERY WHEEL



CFM	HRW DIA	FAN MODEL	COIL AREA (Sqft.)	OVERALL DIMENSIONS											
				H1 + H2	W	PLENUM L1	HRW L2	CWC L3	SA FAN L4	MV L5	HF L6	PLENUM L7	EA FAN L8	HRW L9	PLENUM L10
1000	700	225	2.0	1600+100	1100	850	500	450	850	875	875	550	850	500	550
1200	700	225	2.4	1700+100	1200	850	500	450	850	875	875	550	850	500	550
1500	800	225	3.0	1700+100	1200	850	500	450	850	875	875	550	850	500	550
2000	900	250	4.0	1800+100	1400	900	500	450	900	875	875	550	900	500	550
2500	1000	250	5.0	2000+100	1450	900	500	450	900	875	875	550	900	500	550
3000	1100	315	6.0	2000+100	1500	900	500	450	900	875	875	550	900	500	550
400	1200	355	8.0	2200+100	1700	1000	500	450	1000	875	875	550	1000	500	550
4500	1300	355	9.0	2400+100	1800	1000	500	450	1000	875	875	550	1000	500	550
5000	1400	400	10.0	2400+100	1925	1150	500	450	1150	875	875	550	1150	500	550
6000	1500	450	12.0	2600+100	2025	1250	500	450	1250	875	875	550	1250	500	550
7000	1600	450	14.0	2800+100	2125	1250	500	450	1250	875	875	550	1250	500	550
7500	1700	450	15.0	2800+100	2175	1250	500	450	1250	875	875	550	1250	500	550
8000	1700	500	16.0	2800+100	2225	1350	500	450	1350	875	875	550	1350	500	550
8500	1800	500	17.0	3200+100	2275	1350	500	450	1350	875	875	550	1350	500	550
9000	1800	500	18.0	3200+100	2325	1350	650	450	1350	875	875	550	1350	650	550
9500	1900	560	19.0	3200+100	2375	1450	650	450	1450	875	875	550	1450	650	550
10000	2000	560	20.0	3200+100	2425	1450	650	450	1450	875	875	550	1450	650	550
12000	2200	630	24.0	3400+100	2425	1550	650	450	1550	875	875	550	1550	650	550
13000	2200	630	26.0	3400+100	2500	1550	650	550	1550	875	875	550	1550	650	550
15000	2400	710	30.0	3800+100	2625	1725	650	550	1725	875	875	550	1725	650	550
18000	2600	710	36.0	3800+100	2775	1725	650	550	1725	875	875	550	1725	650	550
20000	2800	800	40.0	4000+100	2975	1850	650	550	1850	875	875	550	1850	650	550
25000	3000	900	50.0	4900+100	3175	2050	650	550	2050	875	875	550	2050	650	550

SINGLE/ DOUBLE CEILING SUSPENDED UNIT (SINGLE BLOWER)

AIR VOLUME (CFM)	FAN MODEL	FAN OUTLET VELOCITY (m/s)	COIL AREA (Sq./Ft.)	RPM / MOTOR KW AT A STATIC PRESSURE		OVERALL DIMENSIONS		
				30 MM WG	40 MM WG	DEPTH	WIDTH	HEIGHT
1200	9 x 9 x 1	7.3	2.4	1166/0.37	1368/0.75	900	900	550+50
1500	9 x 9 x 1	9.1	3.0	1152/0.75	1338/0.75	900	940	550+50
2000	10 x 10 x 1	9.9	4.0	1017/0.75	1177/1.1	950	1040	610+50
2500	12 x 12 x 1	8.8	5.0	872/0.75	1021/1.1	1010	1116	670+50
3000	12 x 12 x 1	10.5	6.0	867/1.1	1005/1.5	1010	1282	670+50
3500	15 x 15 x 1	8.7	7.0	729/1.1	850/1.5	1150	1335	760+50
4000	15 x 15 x 1	9.9	8.0	728/1.1	842/1.5	1150	1480	760+50
4500	18 x 18 x 1	8.0	9.0	612/1.5	713/2.2	1275	1405	900+50
5000	18 x 18 x 1	8.9	10.0	611/1.5	708/2.2	1275	1525	900+50
5500	18 x 18 x 1	9.7	11.0	612/2.2	706/2.2	1275	1655	900+50
6000	18 x 18 x 1	10.6	12.0	615/2.2	705/2.2	1275	1660	930+50

SINGLE/ DOUBLE SKIN CEILING SUSPENDED UNIT (DOUBLE BLOWERS)

AIR VOLUME (CFM)	FAN MODEL	FAN OUTLET VELOCITY (m/s)	COIL AREA (Sq./Ft.)	RPM / MOTOR KW AT A STATIC PRESSURE		OVERALL DIMENSIONS		
				30 MM WG	40 MM WG	DEPTH	WIDTH	HEIGHT
2500	9 x 9 x 2	7.6	5.0	1220/1.1	1430/1.1	900	1550	550+50
3000	9 x 9 x 2	9.1	6.0	1210/1.1	1405/1.5	900	1563	550+50
3500	10 x 10 x 2	8.6	7.0	1070/1.1	1246/1.5	950	1588	610+50
4000	10 x 10 x 2	9.9	8.0	1068/1.5	1236/2.2	950	1778	610+50
4500	12 x 12 x 2	7.9	9.0	925/1.5	1085/2.2	1010	1778	670+50
5000	12 x 12 x 2	8.8	10.0	916/1.5	1072/2.2	1010	1930	670+50
5500	12 x 12 x 2	9.6	11.0	911/2.2	1062/2.2	1010	2096	670+50
6000	12 x 12 x 2	10.5	12.0	911/2.2	1055/3.7	1010	2260	670+50
7000	15 x 15 x 2	8.7	14.0	765/2.2	893/3.7	1200	2353	760+50
8000	15 x 15 x 2	9.9	16.0	765/3.7	884/3.7	1200	2440	800+50
9000	18 x 18 x 2	8.0	18.0	643/3.7	748/3.7	1250	2502	900+50
10000	18 x 18 x 2	8.9	20.0	641/3.7	743/5.5	1250	2743	900+50
11000	18 x 18 x 2	9.7	22.0	642/3.7	741/5.5	1250	2880	960+50
12000	18 x 18 x 2	10.6	24.0	646/5.5	741/5.5	1300	3006	960+50



Ventilair India Pvt. Ltd.

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VENTILATION • AIR CONDITIONING • DUST COLLECTION

PRODUCT RANGE

Dust Proofing

- Dust Scrubbers
- Air conditioning system
- Dust Collector
- Roof Extractor
- Paint Booths
- Bag Filters
- Axial Fans
- Centrifugal Blowers
- General Ventilation
- Fume/Dust Extractor System
- Air Cooling System

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